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ABSTRACT

The introduction and implementation of new educational programs has occurred in public education throughout its history, and staff development has been the primary means by which new programs have been introduced to teachers and administrators. The focus of staff development programs has been on the acquisition of theory and of skills, with the assumption that transfer of skills would occur in the classroom. This literature review investigated the training factors that affect the institutionalization (the sustained use or integration of practices into the regular school program) of developmentally appropriate practices in grades K-3. It was organized around two major works. Bredekamp (1987) defined developmentally appropriate practices as those that develop the physical, emotional, social, and cognitive growth of young children. Age appropriate and individual appropriate learning experiences are to be provided through play and social interaction. Nelson (1989) defined transfer of training as the use of skills learned in training at the workplace, affected by components of the training program, participant attitudes, and stages of teacher development. The review's purpose was to define and identify developmentally appropriate practices and to determine the factors that affect transfer of training. The review revealed the importance of frequent assessments of a program to determine the effectiveness and maintenance of skills provided in training, and it recommends refresher training to ensure maintenance of these training skills. Contains 34 references. (WJC)

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INSTITUTIONALIZATION OF DEVELOPMENTALLY APPROPRIATE
PRACTICES IN PRIMARY GRADES

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Abstract

This literature review identified the factors that affect the institutionalization of developmentally appropriate practices in grades K-3. Institutionalization referred to the sustained use or integration of practices into the regular school program. The purpose was to define and identify developmentally appropriate practices and to determine the factors that affect transfer of training. Bredekamp (1987) defined developmentally appropriate practices as those that developed the physical, emotional, social, and cognitive growth. Age appropriate and individual appropriate learning experiences were provided through play and social interaction. Nelson (1989) defined transfer of training as the use of skills learned in a training at the workplace. Research indicated that the degree of transfer was dependent upon the purpose and components of the training program, participant attitudes and beliefs, and stages of teacher development.

Implications of this review revealed the importance for frequent assessment of a program to determine the effectiveness and maintenance of skills provided in a training program. Refresher trainings were recommended to ensure maintenance of these training skills.

INSTITUTIONALIZATION OF DEVELOPMENTALLY APPROPRIATE PRACTICES IN PRIMARY GRADES

The introduction and implementation of new educational programs have occurred in public education throughout its history. Staff development has been the primary means by which new programs have been introduced to teachers and administrators. The focus of staff development programs has been on the acquisition of theory and the acquisition of skills with the assumption that transfer of theory and skills would occur in the classroom. In 1982 the State of Mississippi mandated the inclusion of kindergarten programs into all public schools. Staff development provided the theory and skills necessary to implement developmentally appropriate kindergartens. An assessment of the impact of these trainings on the institutionalization of developmentally appropriate practices in K - 3 has not been conducted. Institutionalization referred to the sustained use or integration of developmentally appropriate practices into the regular school program at least two years after the initial training (Heller & Firestone, 1995). The purpose of this review was to define and identify developmentally appropriate practices in grades K - 3 and to determine the factors that inhibited or enhanced the transfer of training.

History of Mississippi Kindergartens

In 1982 the State of Mississippi enacted the Mississippi Education Reform Act, which was a comprehensive educational reform package. An important component of that act was the provision for public school kindergartens. The addition of an early childhood education program such as this necessitated the development of two programs, the kindergarten program

itself and a comprehensive staff development program to insure its implementation. Results from surveys of 154 randomly selected school districts indicated that a massive plan of action was necessary to enable school districts to meet this mandate (Grace & Woodruff, 1986). The kindergarten staff development program, as reported by Grace and Woodruff, was developed and implemented in three phases. Phase I addressed the issue of program application, the dissemination of application information, and the development of an administrator's handbook. Phase II dealt with teacher training and curriculum design for a pilot program. Phase III addressed the training for all teachers and administrators in the state as the program was implemented.

An early childhood advisory committee, composed of early childhood educators and advocates from across the state, defined program policy and guidelines and constructed a staff development program. Committees developed the administrator's handbook and the teacher's resource handbook. The administrator's handbook included program philosophy, goals, qualifications of personnel, classroom environment, program curriculum, equipment, materials, program assessment, and role of the parent. The teacher's resource handbook contained theoretical information, program philosophy, goals, and practical applications. The committee created a comprehensive handbook that addressed all curriculum areas. Each activity included a behavioral objective, procedure, list of materials, and method of evaluation (Grace & Woodruff, 1986).

Staff development trainings were conducted across the state. The Early Childhood Coordinator led the trainings and disseminated information in Phases I and II. Training in Phase III involved two sessions. The first session, conducted by the Early Childhood

Coordinator, provided "information regarding state program philosophy and goals, learning theory, curriculum, and instructional techniques" (Grace & Woodruff, 1986, p.13). The second session, led by a master kindergarten teacher, addressed issues of pragmatic implementation of the kindergarten program.

The School Executive Management Institute (SEMI), mandated through the Mississippi Reform Act of 1982, provided leadership and management training for administrators and school board members. One module, or training component, focused on Developmental Instructional Programs in Grades K - 3. The training was developed to maintain and extend the kindergarten program, to evaluate existing programs, to implement developmentally appropriate practices, and to explore assessment strategies (School Executive Management Institute, 1992). This SEMI training module was presented to administrators and teachers in various locations across Mississippi in 1989 and 1990.

Developmentally Appropriate Practices in K - 3

Bredekamp (1987) defined developmentally appropriate practices in a National Association for the Education of Young Children (NAEYC) position statement as the development of physical, emotional, social, and cognitive growth using age appropriate and individual appropriate practices. According to Bredekamp, principles of developmentally appropriate practices included play, learning at the child's own pace, active involvement, interaction with peers and adults, a rich variety of materials, student choice, support for the development of a positive self-concept, and parent involvement. Developmentally appropriate practices recognized the child's age, stage of development, uniqueness, and interests (McGee & Richgels, 1990). The following characteristics distinguished a developmentally appropriate

classroom. The classroom provided an environment that allowed for freedom of exploration and interaction with peers, adults, and materials. Children had freedom to choose activities and were physically and mentally active. Children had concrete learning experiences with materials and in learning centers, such as in the dramatic play area, with blocks, or in content related areas of math, science, reading, writing, art, and music. Children participated in small groups or in individual activities most of the time (Bredekamp, 1987). Bredekamp defined the teacher's role as that of a facilitator. The teacher promoted and guided social interaction, problem solving, and experimentation. The teacher integrated content into unit themes, capitalizing on the child's natural curiosity.

Several researchers reported on the implementation of developmentally appropriate kindergartens which were built upon the position statement and recommendations of NAEYC. Sherman (1992) described a study in which a traditional kindergarten classroom was restructured to include developmentally appropriate practices. The researcher identified four areas to be addressed: (a) environment, (b) curriculum, (c) active learning, and (d) discipline. Sherman identified an appropriate environment as one that allowed for free, orderly movement. The curriculum had to incorporate developmentally appropriate activities with the mandates of the county curriculum. Appropriate activities for active learning included the use of learning centers, sequential and experiential activities, play, social interaction, large and small group activities, individualized activities, and the use of manipulatives. Sherman measured the outcomes using pre and post surveys, observation checklists, and discipline referrals. The classroom teacher completed a pre-post self-report survey which identified the occurrence of inappropriate and appropriate activities. The researcher completed a pre-post

dichotomous observation checklist to identify appropriate activities and compared the number of discipline referrals from the previous year to the year of the study. Results indicated that the environment changed to allow free, orderly movement. Developmentally appropriate activities had been incorporated into the county curriculum in the areas of language arts and math. Opportunities for active learning increased and discipline referrals decreased. This study revealed the successful implementation of developmentally appropriate practices in a kindergarten. However, the long term maintenance of these practices was not assessed.

Two studies on the implementation of developmentally appropriate practices revealed that the Teacher Training Project had led to major changes in classrooms. Mangione (1992) conducted a two year follow-up study to the initial training. He interviewed nine preschool and nine kindergarten teachers in a 15 minute telephone conversation. Each teacher had completed the two year training which included bimonthly visits from the trainer. The interview addressed issues of classroom environment, schedule, curriculum, an understanding of the goals and learning of children, the teacher's role, and assessment techniques. More than half of the teachers reported behaviors consistent with the training goals in 8 out of 10 categories. Mangione indicated that self-reports from teachers was not as effective as self-reports combined with observational data. A second study from Far West Laboratories (1994) reported a two year evaluation of the same training. The purposes of this study were to determine the extent of understanding and implementation of developmentally appropriate practices, its impact on children, and its effects on colleagues, administrators, and schools. The report presented case studies of three kindergarten teachers and three first grade teachers. The researchers measured outcomes through interviews conducted at the beginning and end of

the training and through observations in the classrooms. Two independent observers used the Early Primary Practices Observation Scale (EPPOS) to evaluate the use of developmentally appropriate practices in four domains -- learning environment, curriculum and materials, daily routine, and interaction with children. They reported that the interviews were supported by EPPOS ratings. The researchers noted a general improvement over two years in all four domains. The learning environment improved first, followed by materials and curriculum, daily routine, and finally adult interactions with children. A limitation of this study was the attitude participants had at the onset of the training. Four of the six participants began the training with a general understanding of developmentally appropriate practices and were interested in initiating these practices. One who did not begin with this understanding was successful in implementing many elements of the training program. Another participant who did not begin with an understanding of appropriate practices revealed little change in attitude or use of appropriate practices. Those who began with an understanding strengthened and improved their programs while those who questioned the value of these practices responded differently.

Dodge (1993) summarized the observable characteristics of a developmentally appropriate classroom. Evident in the environment were well-defined interest areas divided by low furniture, learning centers, noisy and quiet areas, labeled and accessible material on low shelves, and children's work displayed at the child's eye level. A rich supply of materials was available, rotated, and replaced frequently. The program included active and quiet periods, small group and individual activities, free outdoor and indoor play, and age appropriate and individually appropriate learning experiences. In the area of teacher interaction with the child,

the observer saw that the teacher made eye contact with the child on the child's level, gave positive responses, and respected the feelings and ideas of the child. The teacher encouraged problem solving and cooperative learning.

The Transfer of Training

Wade defined staff development or inservice education as "any training activity designed to increase competencies needed by employees in the performance of their assignments" (as cited in Henschke, 1988, p. 49). Jones and Lowe (1990) reported that staff development was a continuing process that could be attained through workshops, independent study, teacher rap sessions, curriculum development work sessions, peer observations, or self-assessment. The purposes of staff development, as reported by several authors (Henschke, 1988; Joyce, 1986; Joyce and Showers, 1988; Veenam, VanTulder, & Voeten, 1994), contained similar themes. Staff development programs were designed to encourage teachers and administrators to continuously grow in professional competence -- to increase their awareness of theories, practices, and curriculums. Another purpose of staff development programs was to encourage teachers and administrators to change their attitudes toward themselves, children, and educational programs. A third purpose was to develop new skills or to improve upon existing skills and to perform these skills appropriately in the classroom. Fourth, staff development programs were designed to implement political agreed-upon innovations. Finally, programs were designed to generate continuous efforts to improve school practices.

Staff development programs took on many different forms, based on the desired outcome of the training -- knowledge acquisition, skills acquisition, or transfer of training.

Much research was done on the degree of knowledge and skill acquisition. However, fewer studies were conducted on the degree of transfer of training.

Definitions for transfer of training were similar, especially in concept. Some, however, were general while others were more specific in defining the kind and degree of transfer.

Nelson (1989) defined transfer of training as "the degree to which an individual uses the knowledge and skills learned in training on the job" (p.5). Tallman and Holt (1987) stated that "transfer of learning means that attitudes, knowledge and/or behaviors that are presented in a nonwork setting are later utilized fully or in a modified manner in settings external to the program, generally work settings" (p.15). Early research of James and Thorndike (as cited in Hull et al., 1981) indicated that a strong similarity in conditions must exist for transfer to occur. Joyce and Clift (1984) distinguished two levels of transfer of training -- horizontal and vertical. Horizontal transfer occurred when little additional learning was required. In this case the training setting and workplace were nearly identical. Vertical transfer required additional learning as the skill was transferred. Joyce and Clift stated that teaching required vertical transfer as the teacher adapted the skill to the students and subject, modified or created material, and blended the new skill with the existing approaches.

Ford (1994) defined transfer of training as having multiple meanings, based on the objectives and context of the training. He stated that four questions should be answered to clearly define transfer of training. The first question dealt with what was expected to be changed -- knowledge, skills, or attitudes. Knowledge outcomes included declarative or content knowledge, procedural knowledge that addressed what to do, and strategic knowledge that informed when and why to use new knowledge or skills. The transfer of skill-based programs

was characterized as having three stages, initial skill acquisition, skill compilation, and skill automaticity or mastery. Attitudes reflected such things as the participant's reaction and feelings about the training program, commitment to change, and feeling of self efficacy. Any or all three of these factors, knowledge, skills, and attitudes, had been considered as a measure of transfer of training. The second question to be considered in defining transfer of training was what behaviors were to be transferred and in what settings. Ford stated that observable changes in behavior should be evident, either with direct application or indirect application of newly acquired knowledge or skills. Direct application implied that transfer occurred in identical situations or settings as in the training session. Essentially, the learner mimicked the same behaviors as the trainer. Indirect application occurred when the learner was able to apply newly acquired knowledge and skills to a new situation or setting. Ford identified barriers or inhibitors as the third question to consider in measuring degree of transfer. He indicated that learners should be taught to understand, anticipate, and cope with these barriers. Practicing prevention skills and coping responses through projects, role play, and small group discussions enhanced transfer of knowledge, skills, and attitudes. The final question Ford addressed was the length of time expected for the acquired knowledge, skills, or attitudes to be maintained. He stated that refresher trainings were often needed to prevent skill deterioration. Ford reported that there had been little research completed on the maintenance of skills.

Researchers studied various components of training programs and the impact those components had on transfer of training. Joyce, Hersh, and McKibbin (1983) discussed five components of staff development programs and their impact on transfer. Those components consisted of (a) presentation of theory, (b) modeling or demonstration, (c) practice in simulated

conditions, (d) structured feedback, and (e) coaching. Presentation of theory provided rationale, conceptual base, and a verbal description of the new knowledge, skill, or strategy to be learned. Methods used to present this component were readings, lectures, films, and discussions. The impact of using presentation of theory alone rarely resulted in skill acquisition or transfer of skills into the classroom situation. Modeling or demonstration consisted of the enactment of the teaching skill or strategy through live demonstrations with children or adults or by viewing films or videos. The impact of using this component had an effect on awareness and knowledge, but was unlikely to result in acquisition and transfer of skills. It was noted, however, that this was a valuable component of a training program. Practice under simulated conditions had an extremely effective impact on acquisition of skills and strategies, especially when skills were previously known and were being improved upon or when the simulation was very similar to the workplace. According to Joyce and Showers (1988), a strategy of medium complexity required 20 to 25 trials in a classroom over 8 - 10 weeks. The component of structured feedback gave learners the opportunity to observe and reflect on their own or others' teaching behavior. Structured feedback was most often administered by peers, observers, or coaches, but could also be self administered. Feedback was limited to the specific behavior attempted and was nonevaluative. This component had considerable impact on awareness of teaching behavior and knowledge of alternative behaviors. Changes in behavior occurred as long as feedback was given. However, when feedback stopped, the teacher often reverted to previous behavior. The final component, coaching, occurred in the workplace following the initial training. Its purpose was to address the application stage of the training -- to analyze content material and method to use and to devise plans to assist students in adapting to the new

approach. Coaching provided support, technical feedback, companionship, and collegial problem solving. The impact of using coaching in conjunction with the other four components was significant in regards to the transfer of training.

Joyce and Showers (1988) reported on the degree of transfer as measured by increases in effect size (ES). When the desired training outcome was knowledge, theory presentation increased knowledge by an ES of 0.50. A study conducted by Bennett indicated that when the combination of theory, demonstration, practice in simulated conditions, and feedback was used knowledge acquisition increased by ES of 1.31 (as cited in Joyce & Showers, 1988). When skill was the desired training outcome, theory and demonstration increased skill acquisition by ES 0.50. Skills increased by ES of 1.18 when theory, demonstration, practice, and feedback were used in combination. When coaching was added, skills increased by ES of 1.25. Joyce and Showers reported that there was little noticeable impact on transfer of training even with the combination of theory, demonstration, practice, and feedback -- ES of 0.39. When coaching was added to the training, transfer of training increased to ES of 1.68.

In addition, Joyce and Clift (1984) indicated that the following elements were necessary to assure transfer of training:

1. The problem of transfer should be forecasted throughout the training. The difficulties of transfer and what could be done to overcome them should be included in the initial training program. Fox (1994) supported this finding, indicating that participants needed to be aware of and prepared to meet obstacles or barriers that might inhibit transfer.

2. A high degree of skill should be developed during the training. This could be accomplished through presentation of theory, demonstration or modeling, practice in simulated conditions, and structured feedback.
3. Executive control should be developed. Joyce et al. (1983) defined executive control as the understanding of the purpose and rationale of the skill. This understanding enabled the teacher to adapt and apply the skill to students and content material. In essence, executive control was the appropriate use of a skill -- knowing why, when, and how to use the new skill.

Research conducted on the effects of using the five training components of theory presentation, demonstration or modeling, practice under simulated conditions, structured feedback, and coaching indicated increased transfer when all components were included in the training program. The early work of Showers (1982) examined the effectiveness of coaching at the implementation stage. This study addressed three questions. The first question measured the effectiveness of the coaching treatment on transfer. The second question addressed the problems teachers encountered during the application or implementation stage. The final question dealt with the relationship of teacher transfer with student learning outcomes.

Showers used an experimental pretest-posttest control group design. Subjects consisted of 17 junior high and middle school teachers, nine who were coached and eight who served as the control group. Baseline data was collected prior to the training. The training included three models of teaching, concept attainment, inductive thinking, and synectics. The researcher conducted two teacher interviews and four teacher observations during the study. The statistical procedure of multiple regression was used to determine the effect of coaching on transfer of training and on the student outcomes of verbal ability on essays and recall scores.

Results indicated a significant correlation between coaching and transfer of training. The control group of uncoached teachers reverted to previous teaching behaviors and discontinued use of the new teaching strategies. Results related to the second question of problems of transfer indicated that at both the initiation and the conclusion of the training, 16 of the 17 teachers had intended to use the new strategies. Showers reported six difficulties or hindrances to the transfer of training. The first hindrance was a lack of attempts at implementation. Those who did not practice the skills did not demonstrate transfer. The second difficulty was the appropriate use of the new strategies to the curriculum. Time constraints was listed as the third hindrance. The fourth hindrance dealt with student responses to the new strategy. Teachers felt a loss of control as students assumed more control for their learning. The fifth hindrance related to personal feelings. Teachers reported that the strategies were difficult to implement and that classroom management became a concern. The final hindrance dealt with the structure of the school, primarily the amount and type of support the teachers perceived they had been given. Results related to the third question of transfer in its relationship to student learning outcomes indicated that there was a significant correlation between teacher transfer of training and student recall. There was, however, a nonsignificant correlation between transfer of training and verbal ability on essays. In a follow-up study six to nine months later, Showers (1984) found that coached teachers had maintained a higher level of skill acquisition and degree of transfer than uncoached teachers.

In a study to assess the impact of three inservice training models, Mohlman (1982) found that coaching was not as effective as peer observation. Mohlman identified two purposes for the study. He first examined the current thinking on teacher trainings. Next, he examined

the effectiveness of three different training programs. To answer the first question, Mohlman examined 16 studies of inservice training programs. Two programs included the components of presentation of theory, demonstration, practice, feedback, and coaching. Eight included the presentation of theory, demonstration, practice, and feedback without the coaching component. Six programs contained three or fewer of the five components. Mohlman concluded that many teachers transferred skills after being exposed to presentation, demonstration, practice, and feedback. Some teachers needed coaching in addition to these to assure transfer while others transferred skills after trainings with only presentation with either demonstration or feedback. However, the characteristics of these teachers or the reasons why they were able to transfer could not be discerned. Next, Mohlman studied the effectiveness of three different training programs using four or five components. The first group received a training program that consisted of presentation, demonstration, practice, and feedback. The second and third groups received these same four components plus either peer observation or trainer coaching. Twenty junior high teachers received the same training, Stallings' Effective Use of Time. They were then assigned to one of the three training programs. Mohlman reported the results descriptively, due to nonrandom assignment of subjects and the small group size. The dependent variable was the percent of academic interactions. His findings indicated that all groups improved. Group two with peer observation improved the most. Mohlman concluded that coaching was not significantly effective in aiding transfer of training. It was noted that even though the first group had not been assigned follow-up observation or coaching, teacher assistants observed the teachers at the teachers' requests. Thus, follow-up observation occurred which may have biased the results.

Another study that compared training programs was reported by Henschke (1988). His study had two purposes, to design and implement an effective training program and to investigate and compare the most effective means of enhancing the transfer process. The study was conducted in two phases. Phase one measured the effectiveness of trained teachers to untrained teachers. In the second phase, the trained teachers were randomly assigned to one of four different transfer strategies -- consultant coaching, team coaching, group meetings, and no follow-up. Twenty-seven day care teachers in the St. Louis area served as subjects. Twenty-two were trained while the remaining five served as the control. The dependent variables were scores on a paper-pencil test of knowledge and ratings on a teacher behavior observation scale. Pre and post data were collected for each dependent variable. Henschke used a two factor analysis of covariance (ANCOVA) to analyze the degree of knowledge acquisition, finding a significant difference between the trained and untrained teachers. Using an ANCOVA to measure the ratings on the behavior observation scale, he found no significant difference between trained and untrained teachers. Data for the second phase of the study were compared and analyzed using the two factor covariance of analysis to measure the difference in skill performance of teachers in the four levels of follow up treatment. Henschke found no significant difference. However, teachers in the consultant coaching group and the group meeting treatment improved more than the team coaching and no follow-up groups.

Research confirmed that some form of coaching increased the degree of transfer of training. With coaching, teachers practiced the new skill more frequently, applied it more appropriately, and maintained use of the skill for a longer period than uncoached teachers. Showers and Joyce (1996) reported that coaching in and of itself did not effect student

learning. These researchers redefined coaching to apply to entire schools or school districts as collaborative teams. Verbal feedback as a coaching component was omitted. Instead, teachers collaboratively planned and developed curriculum and instruction. Showers and Joyce emphasized the importance of establishing coaching teams on the first day of training and of providing examples of formats or structures for collaborative planning. Teachers were taught how to monitor the implementation of the new plans or skills and to determine the impact on student learning outcomes. Although the focus of coaching has changed, the importance of coaching as a component of training did not diminish.

In a comprehensive study from the Netherlands, Veenam et al. (1994) reported findings on the impact of inservice training on teacher behavior. The first purpose of the study was to determine the characteristics that made inservice programs effective. The second purpose was to assess the extent to which these characteristics were considered in the planning of the inservice, and the third purpose was to determine the relationship between the characteristics and effects on implementation. Inservice programs selected for the study related to a new primary education program for children between the ages of 4 and 12. A total of 222 programs were evaluated. Questionnaires and interviews were used to obtain data. The sample subjects consisted of 410 teachers, 204 principals, and 53 school teams who participated in an inservice program. The researchers used an adapted model of the Walberg and Genova instrument to measure the use of professional knowledge (as cited in Veenan et al., 1994). The independent variables identified were school characteristics, inservice program features, individual or school focused programs, and implementation characteristics. The dependent variables were classroom-level impact, school-level impact, and knowledge use. Multiple regression analysis

was used to measure the influence of program design features with implementation characteristics. Interaction effects were negligible and nonsignificant. The researchers concluded that the features of inservice programs and characteristics of implementation did not depend on the type of inservice (individual or school focused). Nor did the type of training interact with school characteristics. School characteristics were not significantly related to the impact scores at the classroom level, school level or knowledge use. However, features of the inservice program and implementation characteristics did relate significantly to the impact levels and on knowledge use. An analysis of a small subset of variables revealed that knowledge utilization and implementation was influenced by: (a) a supportive and well organized school organization, (b) explanation of the goals of the inservice program in advance of the training, (c) relevant subject matter, (d) presentation of practical skills, (e) time for practice, (f) active involvement of participants, (g) support and feedback, and (h) support from the principal. The features of these inservice programs -- presentation, time for practice, active involvement, and support and feedback -- which enhanced transfer were similar to the findings that were previously reported in this review.

Hallinger and Greenblatt (1990) reported on the Vanderbilt Principals' Institute, a two week summer program designed to enhance transfer of training. The developers incorporated the following instructional factors which were known to influence cognitive organization of knowledge. Participants were able to compare and test new knowledge with prior knowledge and to apply this knowledge to problems relevant to problems in the workplace. Participants experienced how and under what conditions to apply this new knowledge. Finally, trainers taught why the new knowledge was effective. Thirty-six practicing principals attended the

institute at Peabody College. The program design focused on both cognitive and affective objectives. The conceptual framework provided a common language and frame of reference. Problem solving was the method of instruction. Three problem-based case studies, a general case, personal case, and group case, were analyzed and resolved. Components of the training consisted of theory, demonstration, practice in a simulated condition, and feedback. Anecdotal evidence revealed that participants transferred knowledge and skills while at the institute. No follow up data was available for transfer of training into the local school settings.

Several authors reported on features of effective staff development programs but presented no empirical data. Jones and Lowe (1990) indicated that effective programs were researched based and examined assumptions about teaching, learning, and the subject matter. Effective programs provided practice with feedback and ways to transfer during the training. Impact of the training on student outcomes was also discussed. Staff development programs were more effective when they were part of broad program goals and when teachers were involved in the planning of the program. Steps to assure transfer included: (a) creating materials, lesson plans, and strategies during the inservice, (b) modeling teacher behaviors, (c) demonstrating techniques, and (d) providing practice and feedback at the workplace.

The Kansas University Institute for Research in Learning Disabilities (KU-IRLD) designed and field-tested a new inservice program, the Strategies Intervention Model (SIM). Schumaker and Clark (1990) reported that the training was conducted in four phases. During the needs assessment phase, the interested school district received an overview of the program, evaluated the program in relationship to local needs, and committed to school-wide support. Initial training, the second phase, consisted of lecture and discussion, modeling, role-playing

or simulations, and feedback. Support groups were established for on site training. The training required active and continued participation by all participants. The third phase, the integration phase, involved the participants in learning how to apply the new skills. The final phase was the institutionalization or maintenance phase. Selected teachers were trained to be trainers of the SIM process. This insured continuation of trainings for refresher programs and for new teachers entering the district. Schumaker and Clark reported 70% to 100% implementation in districts trained in the SIM program. No specific number of programs or empirical data was provided. Information was received by personal communication and the terms implementation and institutionalization had not been objectively defined.

Concerned with the low level of transfer, Cheek and Campbell (1994) made several recommendations to increase transfer of training. These authors indicated that trainers must focus on the transfer process, providing transfer facilitators who could maintain support and feedback at the workplace. Second, they recommended that on site evaluations be used to resolve problems, revise plans, and provide observation and feedback. Special projects enhanced transfer when clear objectives were established and feedback was provided. Next, Cheek and Campbell reported that coaching was both powerful and cost effective. Follow-up assignments were effective in examining roadblocks and in providing reinforcement and refresher trainings. Lastly, personal action plans, completed during the training, facilitated transfer.

Teacher attitudes and perceptions were noted as a contributing factor in enhancing or inhibiting transfer of training. Putman and Johns (1987) described a program which incorporated demonstrations as a component. The researchers surveyed 60 inservice teachers'

perceptions of demonstrations. Most teachers preferred live demonstrations and practical rather than theoretical skills. The teachers reported that they would use these skills if: (a) the students liked them, (b) they fit their personal style, (c) they would not create management problems, (d) all materials were available, and (e) feedback was provided.

Lauriala (1992) described a study in which teachers' beliefs, perceptions and understandings of integrated teaching were evaluated. The training consisted of two phases which addressed theoretical features and two phases related to practical application. The trainings included theory, demonstrations, practice, and feedback. The researcher used a case study to describe the effects of the training on 19 elementary teachers. The case study method included open-ended questionnaires, theme interviews, non-participant observations, teachers' diaries, and tape recordings of group discussions. Quantitative content analysis was used in a preanalysis phase, followed by qualitative content analysis. Teachers reported that they were satisfied with the course, especially with the opportunity to practice and obtain feedback and to exchange ideas with other teachers. Teachers' perception of goals changed from a focus on basic facts to the support of student initiative and independence. Teachers also became more concerned with the development of the student's self-confidence and self-awareness. The impact of the training on perception of the curriculum was dependent upon the initial perception of the participants. In general, participants gained a better understanding of the integrated curriculum. The perception of the teacher's role was not uniform at the beginning or end of the training. However, most had clarified their role. Those who began the training with a desire to change, indicated a more accurate role of a teacher using an integrated curriculum. Lauriala reported a change in teaching behavior. Initially, teachers focused on the teacher's

role. They were concerned with preparation of materials and lacked self-confidence in their approaches to teaching. At the end of the training period, the teachers focused on student learning outcomes. This study indicated the effective use of theory, demonstration, practice, and feedback in the transfer of training. Teacher beliefs continued to enhance or hinder the transfer process.

Tallman and Holt (1987) reported that transfer of training was influenced by several factors -- organizational, individual, and program design. They indicated that the organizational factor related to the organizations that sent participants for training and that this factor could impede or enhance transfer. Efforts needed to be made to assure the support and reinforcement needed by participants during the implementation stage. Participants who perceived their workplace as limiting and unprogressive did not transfer newly acquired skills effectively. Individual factors which enhanced or hindered transfer included motivation, educational background, skills and abilities, developmental stages, desired outcomes, and attitudes. Tallman and Holt recommended that a pre and post attitude survey be used to assess the effect of attitudes on transfer and to determine if the training program had an effect on the attitudes of the participant. These researchers indicated that adults seek learning at critical moments in their life, usually during life-changing events. Transfer of training was more likely to occur during these times. Another factor leading to transfer of training was the integration of new information with existing information. This corresponded with the theory of transfer as previously reported. Tallman and Holt made several suggestions to increase transfer of training in relation to program design. These included active audience participation, varied presentation methods, examples directly related to the workplace, benefits of the new skills, and follow-up

or reinforcement programs. Attention to organizational factors, individual factors, and program design were essential in understanding and assessing transfer of training.

Studies by Nelson (1989), Rich (1990), and Lasley, Williams, and Hart (1991) indicated that teacher beliefs hindered transfer of training. Incongruence of teacher beliefs with the teaching strategy prevented implementation of cooperative learning and the use of nonexamples. When teachers had little background or experience in the use of a strategy, they relied on previous personal experiences. Beliefs often did not change until the teachers noted increased learning outcomes as a result of the new teaching technique.

As reported previously, stages of development were reported by Tallman and Holt (1987) as a factor in the transfer of training. In a similar study, Cicchelli (1990) identified the Stages of Concern as a developmental process through which teachers progressed. Teachers progressed through six levels from awareness to refocusing. The first three levels dealt with issues related to oneself, from no concern for the knowledge or skill to questions of the effect the knowledge or skill had on the individual. During the fourth level of concern, the teachers focused on the management of the newly acquired skill. The final three levels related to the impact the skill or strategy had on student learning outcomes. The degree of transfer corresponded to the level of concern at which the teacher was operating. Little transfer occurred at the first three levels and increased with each higher level of concern.

The issue of inservice trainings and transfer of training remained relatively unchanged in the 1990's. Hallinger and Greenblatt (1990) stated that the issue of transfer received only lip service. Darling-Hammond (1996) reported that many districts spent less than 1% of the total school budget on staff development and inservice continued to be predominantly one-shot

workshops. She reported that teachers were not expected to meet with colleagues or to observe in other classrooms and that time was not provided for these activities.

Summary

The National Association for the Education of Young Children defined developmentally appropriate practices as those that developed the physical, emotional, social, and cognitive growth of young children (Bredekamp, 1987). The developmentally appropriate program included active and quiet periods, small group and individual activities, free outdoor and indoor play, and age appropriate and individually appropriate learning experiences. The classroom had well-defined interest areas divided by low furniture, learning centers, noisy and quiet areas, and labeled and accessible material on low shelves. A rich supply of materials was available, rotated, and replaced frequently. Teachers interacted with the children, making eye contact with the child on the child's level. They gave positive responses and respected the feelings and ideas of the child. The teacher encouraged problem solving and cooperative learning.

Research on the transfer of training indicated that the degree of transfer was dependent upon the purpose and components of the training program, participant attitudes and beliefs, and stages of teacher development. A synthesis of the research revealed that transfer of training increased when a combination of training components was used. When the presentation of theory, demonstration, practice, and feedback were combined, transfer of training increased. Researchers reported conflicting results on the effectiveness of coaching on transfer. Teaching participants to understand, anticipate, and cope with the barriers that hinder implementation of

skills increased the degree of transfer of training. Recent research indicated that refresher trainings were essential in the maintenance of skills.

References

- Bredenkamp, S.(Ed.). (1987). Developmentally appropriate practice in early childhood programs serving children form birth through age 8. (Expanded ed.). Washington, DC: National Association for the Education of Young children.
- Cheek, G. D., & Campbell, C. (1994). Help them use what they learn. Adult Learning, 5, 27-28.
- Cicchelli, T. (1990). Concerns theory in liberal arts related to perservice education of undergraduate and graduate students. Educational Research Quarterly, 14(4), 41-47.
- Darling-Hammond, L. (1996). The quiet revolution: Rethinking teacher development. Educational Leadership, 53(6), 4-10.
- Dodge, D. T. (1993). A guide for supervisors and trainers on implementing the creative curriculum for early childhood (3rd ed.). Washington, DC: Teaching Strategies.
- Far West Laboratories. (1994, April). The Teacher Training Project: Study of the implementation of developmentally appropriate practice in classrooms and schools. San Francisco, CA: Author. (ERIC Document Reproduction Service No. ED 379 085)
- Ford, J. K. (1994). Defining transfer of learning: The meaning is in the answers. Adult Learning, 5, 22-23,30.
- Fox, R. D. (1994). Planning continuing education to foster the transfer of learning. Adult Learning, 5, 24-25.

Grace, C., & Woodruff, J. B. (1986, November). The Mississippi module: Designing and implementing staff development for statewide implementation of early childhood programs in public schools. Paper presented at the Annual Conference of the National Council of States on Inservice Education, Nashville, TN. (ERIC Document Reproduction Service No. ED 276 697)

Hallinger, P., & Greenblatt, R. (1990). Designing professional development for transfer learning. Planning and Changing, 21, 195-206.

Heller, M. F., & Firestone, W. A. (1995). Who's in charge here? Sources of leadership for change in eight schools. The Elementary School Journal, 96(1), 65-86.

Henschke, J. A. (1988, October). A comparison of three transfer of training strategies in inservice adult teacher training. Paper presented at the meeting of the Midwest Research-to-Practice Conference in Adult and Continuing Education, Madison, WI. (ERIC Document Reproduction Service No. ED 321 029)

Hull, R., Baker, R., Kyle, J., Goad, R., Duncan, A., Hutton, R., Miller, H., & Ohmer, J. (1981). A report of a research seminar conducted at the University of Oregon, Fall, 1981. Eugene, OR: University of Oregon. (ERIC Document Reproduction Service ED 223 561)

Jones, E. V., & Lowe, J. (1990). Changing teacher behavior: Effective staff development. Adult Learning, 1(7), 8-10.

Joyce, B. R. (1986). Improving America's schools. New York: Longman.

Joyce, B. R., & Clift, R. T. (1984). Teacher education and the social context of the workplace. Childhood Education, 61(2), 115-119, 122-128.

Joyce, B. R., Hersh, R. H., & McKibbin, M. (1983). The structure of school improvement. New York: Longman.

Joyce, B., & Showers, B. (1988). Student achievement through staff development. New York: Longman.

Lasley, T. J., Williams, S. J., & Hart, P. M. (1991). Nonexamples: Why teachers don't use them and why teacher educators should. Mid-Western Educational Researcher, 4(3), 2-6.

Lauriala, A. (1992). The impact of innovative pedagogy on teacher thinking and action: A case study of an inservice course for teachers in integrated teaching. Teaching and Teacher Education, 8, 523-536.

Mangione, P. L. (1992, April). Teachers' reports on implementing developmentally appropriate practice. Paper presented at the American Educational Research Association's Annual Meeting, San Francisco, CA. (ERIC Document Reproduction Service No. ED 349 296)

McGee, L. M., & Richgels, D. J. (1990). Literacy's beginnings: Supporting young readers and writers. Boston: Allyn and Bacon.

Mohlman, G. G. (1982, March). Assessing the impact of three inservice teacher training models. Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY. (ERIC Document Reproduction Service No. ED 215 971)

Nelson, J. E. (1989, March). Please don't ignore the adult in me: Using Human Resource Development (HRD) training strategies to enhance transfer of inservice learning. Paper presented at the American Council on Rural Special Education Conference, Ft. Lauderdale, FL. (ERIC Document Reproduction Service No. ED 315 213)

Putnam, J., & Johns, B. (1987) The potential of demonstration teaching as a component for teacher preparation and staff development programs. International Journal of Educational Research, 11, 577-588.

Rich, Y. (1990). Ideological impediments to instructional innovation: The case of cooperative learning. Teaching and Teacher Education, 6(1), 81-91.

School Executive Management Institute (1992). Structure and guidelines. Jackson, MS: Mississippi Department of Education.

Schumaker, J. B., & Clark, F. L. (1990). Achieving implementation of strategy instruction through effective inservice education. Teacher Education and Special Education, 13(2), 105 116.

Sherman, G. (1992). Restructuring a kindergarten classroom to include more developmentally appropriate activities. Unpublished practicum paper, Nova University, FL. (ERIC Document Reproduction Service No. ED 350 097)

Showers, B. (1982). Transfer of training: The contribution of coaching. Eugene, Oregon: University of Oregon. (ERIC Document Reproduction Service No. ED 231 035)

Showers, B. (1984). School improvement through staff development: The coaching of teaching. In proceedings Making our schools more effective: Proceedings of Three State Conferences. (ERIC Document Reproduction Service No. ED 249 593)

Showers, B., & Joyce, B. (1996). The evolution of peer coaching. Educational Leadership, 53(6), 12-16.

Tallman, D. E., & Holt, M. E. (1987). Moving learning from workshops to work. Continuing Education Review, 51(1), 15-31.

Veenam, S., Van Tulder, M., & Voeten, M. (1994). The impact of inservice training on teacher behavior. Teaching and Teacher Education, 10(1), 303-317.